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FEDERAL COMMUNICATIONS COMMISSION

CC Docket No. 92-237
Administration of the North American Numbering Plan
Carrier Identification Codes (CICs)

March 20, 1997

REQUEST FOR INFORMATION FROM NEC

Please note that the information we seek is intended to be relied upon for inclusion in the public record in CC Docket No. 92-237. This request will also be included in the docket. You may fax your response to Elizabeth Nightingale at (202) 418-2345.   Please respond by **COB Tuesday, March 25, 1997**. We will be responsible for assuring that your response is included in CC Docket No. 92-237. Thank you for your cooperation. If you have any questions, you may call Elizabeth Nightingale at (202) 418-2352.

Please respond to the following questions/requests.

1)   What is your estimated share of the PBX market?

2)   When did you have a PBX product available for sale that supports four digit CICs? Please list all your PBX product lines, indicating for each, when the product was available for sale, whether the system has always been four digit CIC capable, and if not, when modification software and hardware to support the change to four digit CICs was made available for sale.

3)   What percent of your customers, as of March 1997, have PBXs capable of recognizing four digit CICs (what percent has purchased a PBX that supports four digit CICs or purchased the software necessary to change existing PBXs to support four digit CICs)?

4)   Of those customers whose systems were not yet capable of recognizing four digit CICs as of March 1997, what percent will need to make software changes and what percent will need to make hardware changes?

5)   Do you inform your customers, or any of your distributors, of the steps necessary to enable their systems or systems they distribute to support four digit CICs? How did/do you inform them?

6)   Hardware Changes:
      a)   What are the steps necessary for your customers whose PBXs need hardware changes, and do hardware changes always mean system replacement? If not, what other kinds of hardware changes are possible and what percent of customers needing hardware changes actually need system replacement?

b)   Please estimate the cost for such changes and replacement.

hardware changes

an estimate of $_____ per system.

an estimate of time per system _____.

system replacement

an estimate of $_____ per system.

an estimate of time per system (installation)_____.

7)   Software Changes:

an estimate of $_____ per system.

an estimate of time per system _____.

8)   When did your PBX customers upgrade their systems to recognize interchangeable area codes (INPAs)? Did the upgrade include the four digit CIC capability?

9)   When did your PBX customers upgrade their systems to recognize the toll free 888 numbers? Was it the same upgrade as that for INPAs? Did the upgrade include the four digit CIC capability?

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REQUEST FOR INFORMATION FROM
SIEMENS BUSINESS COMMUNICATION SYSTEMS, INC.

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Please respond to the following questions/requests.

1) What is your estimated share of the PBX market?

2) When did you have a PBX product available for sale that supports four digit CICs? Please list all your PBX product lines, indicating for each, when the product was available for sale, whether the system has always been four digit CIC capable, and if not, when modification software and hardware to support the change to four digit CICs was made available for sale.

3) What percent of your customers, as of March 1997, have PBXs capable of recognizing four digit CICs (what percent has purchased a PBX that supports four digit CICs or purchased the software necessary to change existing PBXs to support four digit CICs)?

4) Of those customers whose systems were not yet capable of recognizing four digit CICs as of March 1997, what percent will need to make software changes and what percent will need to make hardware changes?

5) Do you inform your customers, or any of your distributors, of the steps necessary to enable their systems or systems they distribute to support four digit CICs? How did/do you inform them?

6) Hardware Changes:
   a) What are the steps necessary for your customers whose PBXs need hardware changes, and do hardware changes always mean system replacement? If not, what other kinds of hardware changes are possible and what percent of customers needing hardware changes actually need system replacement?

   b) Please estimate the cost for such changes and replacement.

   <u>hardware changes</u>

   an estimate of $_____ per system.

   an estimate of time per system _____.

   <u>system replacement</u>

   an estimate of $_____ per system.

   an estimate of time per system (installation)_____.

7) Software Changes:

   an estimate of $_____ per system.

   an estimate of time per system _____.

8) When did your PBX customers upgrade their systems to recognize interchangeable area codes (INPAs)? Did the upgrade include the four digit CIC capability?

9) When did your PBX customers upgrade their systems to recognize the toll free 888 numbers? Was it the same upgrade as that for INPAs? Did the upgrade include the four digit CIC capability?

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REQUEST FOR INFORMATION FROM MITEL

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Please respond to the following questions/requests.

1) What is your estimated share of the PBX market?

2) When did you have a PBX product available for sale that supports four digit CICs? Please list all your PBX product lines, indicating for each, when the product was available for sale, whether the system has always been four digit CIC capable, and if not, when modification software and hardware to support the change to four digit CICs was made available for sale.

3) What percent of your customers, as of March 1997, have PBXs capable of recognizing four digit CICs (what percent has purchased a PBX that supports four digit CICs or purchased the software necessary to change existing PBXs to support four digit CICs)?

4) Of those customers whose systems were not yet capable of recognizing four digit CICs as of March 1997, what percent will need to make software changes and what percent will need to make hardware changes?

5) Do you inform your customers, or any of your distributors, of the steps necessary to enable their systems or systems they distribute to support four digit CICs? How did/do you inform them?

6) Hardware Changes:
   a) What are the steps necessary for your customers whose PBXs need hardware changes, and do hardware changes always mean system replacement? If not, what other kinds of hardware changes are possible and what percent of customers needing hardware changes actually need system replacement?

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b)   Please estimate the cost for such changes and replacement.

<u>hardware changes</u>

an estimate of $_____ per system.

an estimate of time per system _____.

<u>system replacement</u>

an estimate of $_____ per system.

an estimate of time per system (installation)_____.

7)   Software Changes:

an estimate of $_____ per system.

an estimate of time per system _____.

8)   When did your PBX customers upgrade their systems to recognize interchangeable area codes (INPAs)? Did the upgrade include the four digit CIC capability?

9)   When did your PBX customers upgrade their systems to recognize the toll free 888 numbers? Was it the same upgrade as that for INPAs? Did the upgrade include the four digit CIC capability?

FEDERAL COMMUNICATIONS COMMISSION

**CC Docket No. 92-237, Administration of the North American Numbering Plan,
Carrier Identification Codes (CICs)**

March 20, 1997

REQUEST FOR FURTHER INFORMATION FROM THE MULTIMEDIA TELECOMMUNICATIONS ASSOCIATION (MMTA, FORMERLY NATA)

Please note that the information we seek is intended to be relied upon for inclusion in the public record in CC Docket No. 92-237. This request will also be included in the docket. You may fax your response to Elizabeth Nightingale at (202) 418-2345 or e-mail it to her at "enightin@fcc.gov". Please respond by COB Tuesday, March 25, 1997. We will be responsible for assuring that your response is included in CC Docket No. 92-237. Thank you for your cooperation. If you have any questions, you may call Elizabeth Nightingale at (202) 418-2352.

In your October 19, 1996 filing, you state that MMTA members responding to an inquiry on equipment capability to process four digit CICs expressed little concern about the newer systems' capabilities because programming or software changes are generally possible. You state, however, that there was concern expressed about older systems which may need to be replaced.

Questions/Requests

Please provide an estimate regarding the percent, as of March 1997, of your PBX user members whose systems, either through software upgrades or hardware upgrades/replacement, are capable of processing four-digit CICs.

Regarding the older systems you mention, please identify each system, listing the system's manufacturer, the type of system and the year the manufacturer offered it for sale. Please indicate whether any of the older systems were manufactured/sold by companies no longer in business.

For those whose systems are not, as of March 1997, capable of processing four digit CICs, please provide an estimate regarding the percent who need merely software modifications. Of those needing hardware changes, what percent will need to replace their systems completely and what percent (if any) will be able to perform other types of hardware changes. If there are other type of hardware changes possible, please list them.

Please provide a cost estimate for software changes, hardware changes and hardware replacement, indicating cost in terms of money and time for each. If there are other hardware changes possible other than complete replacement, please list the cost estimates for each type.

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When your PBX user members upgraded their systems to recognize interchangeable area codes (INPAs), did the upgrade include the four digit CIC capability?

When your PBX user members upgraded their systems to recognize the toll free 888 numbers, did the upgrade include the four digit CIC capability?

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REQUEST FOR FURTHER INFORMATION FROM NOTHERN TELECOM

Please note that the information we seek is intended to be relied upon for inclusion in the public record in CC Docket No. 92-237. This request will also be included in the docket. You may fax your response to Elizabeth Nightingale at (202) 418-2345. Please respond by **COB Tuesday, March 25, 1997**. We will be responsible for assuring that your response is included in CC Docket No. 92-237. Thank you for your cooperation. If you have any questions, you may call Elizabeth Nightingale at (202) 418-2352.

Please respond to the following questions/requests.

1) PBX Product Availability.
In your October 15, 1996 filing, you indicate that in the first quarter of 1994, a product was available for sale that supports four digit CICs.

a) Question/Request Is the "product" to which you refer an entire PBX system or rather the software capable of enabling a preexisting system to become four digit CIC compliant? If it is software, are there are any PBX systems available for sale that are four digit CIC compliant "as is?" If so, please list the products and indicate for each when you made them available.

b) Question/Request What Nortel PBX systems that are still in use can be upgraded by software? Please list the systems, indicating for each the type and year it was first offered for sale. What Nortel PBX systems that are still in use would need to be uprgraded with a hardware change or replaced completely.

2) Percent of Users with four digit CIC Capable Systems
In your October 15, 1996 filing, you state that, as of July 1996, 70 percent of your PBX customers had purchased software to support four digit CICs.

a) Question/Request. Of the 30 percent of your PBX customers that did not have four-digit CIC capable systems in July 1996, what percent has that capability now (as of March 1997)?

3) Modifications Needed
While in your October 15, 1996 filing, you describe steps you have taken to educate your customers regarding the steps necessary to upgrade systems, you do not indicate what those steps are.

a) **Question/Request.** What percent of your PBX customers that, as of March 1997, did not have four digit CIC capable systems, have systems capable of upgrading through software changes. For those needing hardware changes, will they all need to be completely replaced or are there other hardware changes possible? If other hardware changes are possible, please list them. For those needing hardware changes, please indicate the percent that would need complete replacement.

4) Costs of Modifications

In your October 15, 1996 filing, you state that costs to upgrade a system to support four digit CICs is "included with base software, available mid-94. You also state that the cost of upgrading varies dependent upon the "original system type and vintage [and that it] could be as simple as software update." You state that time cost estimates are not readily available.

a) **Question/Request.** Please clarify what is meant by "included with base software." Please expand upon "original system type and vintage." For each system types and vintage, please indicate the upgrade cost for each in terms of money and time (if available).

b) **Question/Request.** You do not indicate what hardware changes would cost. Please provide an estimate for the costs of hardware changes, both in terms of money and time (if available), for each type of hardware change. Also indicate the cost of replacing an existing system with a new system, both in terms of money and installation time (if available).

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March 20, 1997

REQUEST FOR FURTHER INFORMATION FROM LUCENT TECHNOLOGIES

Please note that the information we seek is intended to be relied upon for inclusion in the public record in CC Docket No. 92-237. This request will also be included in the docket. You may fax your response to Elizabeth Nightingale at (202) 418-2345. Please respond by **COB Tuesday, March 25, 1997**. We will be responsible for assuring that your response is included in CC Docket No. 92-237. Thank you for your cooperation. If you have any questions, you may call Elizabeth Nightingale at (202) 418-2352.

Please respond to the following questions/requests.

1) Percent of Users with four digit CIC Capable Systems
In your October 5, 1996 filing, you state that 65-70 of your PBX customers whose systems had three digit CIC capability now have systems with four digit CIC capability.

    a) Question/Request. Of the 30-35 percent of your PBX customers that did not have four-digit CIC capable systems in October 1996, what percent has that capability now (as of March 1997)?

2) Modifications Needed
You state that all Lucent/AT&T software-driven PBXs, which were first manufactured in the 1970s and are the systems used by most Lucent customers, require only a software upgrade. You state further that a small number of customers use "wired-logic electro-mechanical PBXs" which require rewiring.

    a) Question/Request. Are the above two changes (software and rewiring) the only changes needed for your customers' systems to be four digit CIC capable? If not, what other hardware changes may be needed? Would any systems need to be completely replaced? Is the Definity Product line (the line you indicate comes equipped to recognize INPAs and four digit CICs, without changes) the only possible product line to purchase if a PBX needs to be completely replaced with a system that will be four digit CIC compliant or do you now offer other PBX product lines which are ready, "as is," to recognize four digit CICs? If so, please list those PBX product lines, indicating the date at which they were available for sale.

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3) Costs of Modifications
While you indicated in your October 5 filing that software changes would cost 1-5% of the PBX purchase price and one hour of down time, you do not indicate what hardware changes would cost other than to say that they would require additional time.

   a) Question/Request. For each hardware change you identify---rewiring, other, complete replacement (Definity or other), please estimate the cost, both in terms of money and time.

   b) Question/Request. For the percent of customers that still, as of March 1997, does not have four digit CIC capable systems, what percent would need a hardware change and what kind, rewiring, other or complete replacement?

4) Clarification Regarding Definity Product Line
In your October 15 Supplemental filing you indicate that Lucent supported the definity product line in 1993, but in your October 5 filing you state that you began to offer Definity in 1992.

   a) Question/Request. Please clarify. Was Definity available from the outset with four-digit CIC capability?

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Table III-1.6	PBX MANUFACTURER MARKET SHARE BY LINES SHIPPED, 1990-1995					
	1990	1991	1992	1993	1994	1995
AT&T	25.9%	27.8%	28.6%	26.9%	25.2%	25.0%
Northern Telecom	22.6%	23.5%	24.8%	23.9%	24.2%	24.7%
Siemens Rolm	19.7%	18.9%	16.1%	14.0%	13.8%	13.3%
Mitel	6.4%	5.8%	5.5%	8.3%	10.3%	9.7%
NEC	6.3%	6.5%	5.3%	5.6%	6.4%	8.5%
Fujitsu	1.5%	2.7%	3.9%	4.3%	4.6%	6.0%
Ericsson	1.9%	2.1%	2.5%	3.0%	3.3%	2.8%
Intecom	1.8%	2.4%	2.6%	2.5%	2.3%	2.7%
Hitachi	1.8%	1.8%	2.0%	2.1%	2.1%	2.5%
Tadiran	2.3%	1.9%	2.1%	1.8%	2.0%	1.9%
Toshiba	2.3%	1.5%	1.6%	1.5%	0.8%	1.3%
Others	7.6%	5.0%	5.1%	5.8%	5.1%	3.1%
Total lines (000)	4,005	3,723	3,584	3,624	3,891	4,028

MMTA developed these estimates based on its own data and those of Eastern Management Group.

Source: MMTA

TEXT COMMITTED.